

Question Paper

Exam Date & Time: 12-Dec-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER MASTER OF SCIENCE (AUDIOLOGY) DEGREE EXAMINATION - DECEMBER 2019
SUBJECT: MAU 603 - COCHLEAR PHYSIOLOGY
(2018 SCHEME)
Thursday, December 12, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain in Detail Macro and Micro Anatomy of cochlea with the neat diagram. (20)
- 2) Write in detail on Instrumentation and techniques for recording endocochlear potentials. (20)
- 3A) Highlight on Techniques to study the hair cell and basilar membrane physiology. (10)
- 3B) Explain the effect of advancing age on cochlea. (10)
- 3C) Write a note on Characteristics of different types of OAEs. (10)
- 3D) Write a note on Blood Supply to the cochlea. (10)

4. Short essays:

- 4A) Factors affecting OAE. (5)
- 4B) Clinical Application of Cochlear Microphonic. (5)
- 4C) Cochlear non-linearity. (5)
- 4D) Nutrients related to sensory cell physiology. (5)

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Question Paper

Exam Date & Time: 13-Dec-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER MASTER OF SCIENCE (AUDIOLOGY) DEGREE EXAMINATION - DECEMBER 2019
SUBJECT: MAU 605 - NEUROPHYSIOLOGY OF HEARING
(2018 SCHEME)
Friday, December 13, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain frequency, intensity and temporal coding at the level of cortex. (20)
- 2) Define nonlinearity and explain the nonlinearities of the auditory nerve. (20)
- 3A) Short note on physiology of the Auditory nerve. (10)
- 3B) Briefly explain role of auditory cortex in sound localization. (10)
- 3C) Explain physiology of cochlear nucleus. (10)
- 3D) Plasticity of auditory cortex. (10)

4. Short essays:

- 4A) Intensity coding in auditory nerve (5)
- 4B) Anatomy of IAM (5)
- 4C) Neurotransmitters (5)
- 4D) Neat diagram of SOC (5)

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Question Paper

Exam Date & Time: 14-Dec-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER MASTER OF SCIENCE (AUDIOLOGY) DEGREE EXAMINATION - DECEMBER 2019
SUBJECT: MAU 607 - HEARING SCIENCES
(2018 SCHEME)
Saturday, December 14, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Discuss the importance of theory of signal in auditory and non-auditory tests. (20)
- 2) Explain various factors affecting loudness and pitch perception. (20)
- 3A) Explain excitation patten and its importance in masking and loudness perception. (10)
- 3B) Explain psychophysical laws with its advantages and disadvantages. (10)
- 3C) Explain any two methods to estimate shape of auditory filter. (10)
- 3D) Explain loudness perception model. (10)

4. Short essays:

- 4A) Explain the equal loudness curve in air and under water. (5)
- 4B) Central masking (5)
- 4C) loudness adaption (5)
- 4D) Absolute and relative differential threshold. (5)

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